3D Marine Aircraft Wing
"Bello Ac Pace Paratus"
Prepared in Peace and War

USMC Update

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Marine Aircraft Wings

- 1stMAW Okinawa Japan
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- 2dMAW MCAS Cherry Point NC
  - CAPT Joseph O'brien
- 3dMAW MCAS Miramar CA
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- 4thMAW New Orleans LA
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Agenda

- CNAF Top Ten Aeromedical Safety Concerns
- Marine Centered Medical Home
- CASEVAC/Patient Movement
- Recruitment, Retention and Promotion of qualified s
- Questions

USMC Aeromedical Safety Concerns

- 1. Spatial Disorientation and CFIT Mitigation
- 2. Fatigue Operations
- 3. Hypoxia and Decompression Sickness (DCS)
- 4. Vibration, Neck, Back Pain and Injury (Wells)
- 5. G-Induced Loss of Consciousness (G-LOC) prevention
- 6. Unmanned Aircraft Systems (UAS) and Manned Manpower, Personnel, Training, and Education (MPT&E)
- 7. Motion Sickness
- 8. Vision Enhancement and Protection
- a. Refractive Eye Surgery
- b. Directed Energy Weapons (DEW)
- 9. Hearing Protection and Performance
- 10. EMALS / Magnetic Environment Exposure

Fatigue Operations

- VMA and VMFA communities utilized Performance Maintenance Program(PMP) in OIF.
- VMA,VMFA and VMM initiated program for Operation Inherent Resolve(OIR) mission.
- NAVMED P6410 requires revision
  - BUMED NOTICE 6410: modafinil preferred and zaleplon acceptable
- 3dMAW Fatigue and Performance Maintenance Policy reflects current practice

3dMAW FY 14 Hypoxia and DCS

- **DATE UNIT TMS EVENT**
- **7/12/2014 VMA-311 AV-8B Tingling in lips, fingers, toes, while passing through 23K. Cabin pressure normal, however, pilot also experienced euphoria and decided he was hypoxic.**
- **9/14/2014 VMFAT-101 F-18D Pilot experienced DCS (no event info available)**
- **10/7/2014 VMFAT-101 F-18D Same aircraft as above incident. Cabin depressurized at three altitudes (14K, 25K, 35K). Pilot post flight DCS symptoms and required multiple treatments**
- **9/3/2014 VMFA(AW)-225 F-18D Pilot and WSO felt abnormal pressure changes at 20K, no indications on altimeter. Both evaluated . WSO diagnosed with DCS.**

2dMAW Hypoxia and DCS

- **DATE UNIT TMS EVENT**
- **9/30/2014 VMFA(AW)-533 F-18D HWSO experienced DCS after loss of cabin pressurization.**
- **7/31/2014 VMFA(AW)-533 F/A-18D Aircrew experienced DCS symptoms following ECS surging.**
- **8/22/2013 VMFA-251 F/A-18C HP experienced DCS symptoms after having a rapid loss of cabin pressure at 32,000' MSL.**
- **3/28/2013 VMFA-115 F-18D HP experienced DCS symptoms after having a rapid decompression at an altitude of 33K' MSL.**

Marine Centered Medical Home

- **The Marine Centered Medical Home (MCMH) is a federated effort by USMC and Navy Medicine to EFFECTIVELY deliver high quality medical care to operational Marines in appropriate garrison medical facilities.**

- **MCMH is a comprehensive USMC garrison care construct modeled after similar Navy Medicine and civilian sector approaches – while respecting USMC-specific prerogatives.**
  - **One standard of care across Department of the Navy.**
  - **Enhanced access to and quality of care.**
  - **Integration with Navy Medical Neighborhood (IT, Sports Medicine, Behavioral Health, Ancillary support, etc.).**

Marine Centered Medical Home

- **MCMH Master Plan:**
  - **Six (6) pilot sites initiated 23Jan2013.**
  - **Expand to 17 more sites in FY15.**
  - **A final ten (10) sites require MILCON.**
    - **29 Palms estimated complete in late FY14/early FY15.**
    - **Kaneohe Bay construction scheduled to start in FY16.**
    - **Eight (8) others require new construction or expansion to meet final requirements.**

- **Behavioral Health Integration Program (BHIP)**
  - **Separate DoD program embedding Behavioral Health provider in primary care clinics.**
  - **HQMC (HS) and BUMED have linked this program directly to MCMH**

MCMH Annual Review

- Nearly 27K Marines are enrolled in a MCMH
- Controlling costs: In CY2013 ED utilization rates were ½ that of Marines enrolled to nearby MTFs and ½ of OPFOR enrolled Marines for a net cost avoidance of $5MIL
- Maintaining continuity: MCMH enrollees see a member of their primary care team 85% of the time
- Improving Access: MCMH enrollees have 15% greater access to same day appointments compared to Marines at nearby MTFs and 5% greater access compared to the entire Navy.
- Coordinating Care: MCMH enrollees have a higher % of kept referral appointments and shorter wait times for their appointments
- Improving Readiness: Enrolled units are maintaining >82% Fully Medically Ready status (a

MCMH Challenges

- Flight Surgeon is .5 FTE per SECNAVINST 6410.1
- Dual mission Primary Care and Aeromedical Safety
- OPTEMPO
  - 25%-50% availability
- Minimal organic administrative support
  - No clinic manger
- No Case manager
  - LVN care coordinator
- Requires BSO 18 integration and support
  - Coordination with multiple MTFs
- NCQA PCMH recognition

"CASEVAC"/Patient Movement

- **2011 Marine Corps Expeditionary Health Service Support (EHSS) Capabilities-Based Assessment (CBA) GAPS**

Casualty Evacuation (CASEVAC) Patient Movements

The force lacks adequate training to conduct CASEVAC operations

Conduct Mass Casualty Operations during Patient Movement

The force lacks sufficient personnel, equipment, and dedicated lift assets to conduct CASEVAC operations

***The USMC lacks sufficient policy and doctrine on the conduct of CASEVAC operations**

USMC HS Operational Advisory Group

- **Doctrine recommendation accepted by voting members**
- Establish a requirement for a USMC patient movement capability specifically manned, trained, equipped for employment on designated platforms (land, sea, air).
  - Capability ranges from Tactical Combat Casualty Care to Damage Control Resuscitation and supports critical care
  - Basic patient movement element is two “CASEVAC” corpsman scalable to en route care nurse or a physician led critical care team

"CASEVAC"ERCS-DOTMLPF

- Organization- ERC team organic to MAW
- Training- proposed utilization of existing 8401 SAR MED Tech with revisions
  - NETC is determining training solution for NEC 8401
  - 8401 JDTA recommended NMOTC stand-up a formal course to train 8401 and Navy ERC RNs
- *This is Blue/Green solution; NAVMED and the Fleet concur with this training pipeline for 8401*

Weapons and Tactics Instructor (WTI) Course

- **Marine Aviation Weapons and Tactics Squadron One (MAWTS-1)**
  - **WTI Course is a fully integrated course of instruction for highly experienced and fully qualified officers from all aviation communities. Officers from ground combat, combat support, and combat service support also attend the course to ensure appropriate air-ground interface. The WTI course academic syllabus allows the WTI candidate to put classroom lessons to work in the air.**
- **USMC "Top Gun"**
- **WTI now integrates medical training and patient movement**

WTI 1-15 FINEX 2

- Shock Trauma Platoon(STP)
  - Split into Shock Trauma Section(STS) one tasked ERC
- CASEVAC from POI to STP via UH1
- TACEVAC from STP collocated at Fire base via MV-22
- Flight from STP to Camp Pendleton where patient transferred to 1st Med Battalion Surgical Company
- High fidelity training for Aircrew and Medical personnel

ECASEVAC OEF 14.1

CJCS RFF
-USMC MV-22

12 US Army Medics

Sourcing

U.S. Army (Reclama)

Takes Air Ambulance Co Offline

U.S. Navy (Reclama)

Deferred to USMC organic HM

U.S. Marine Corps

MARCENT
MARFORCOM
II MEF

TRAINING

	ACT RATE	SEX	CMD	AERO ID	Initial Waiver	FT Rucker Course	Pistol Range	Water Survival	Gas Chamber
1	HMC	M	II MHG	756725	Y-Derm (Cleared)	PASSED	PASSED	PASSED (AirCrew Qual)	PASSED
2	HM1	M	MAG-26	1321877	N	PASSED	PASSED	PASSED (AirCrew Qual)	PASSED
3	HM2	M	DIV	1322724	N	PASSED	PASSED	PASSED (AirCrew Qual)	PASSED
4	HM2	M	MACG-28	1321239	Y-Ortho (Cleared)	PASSED	PASSED	PASSED (AirCrew Qual)	PASSED
5	HM2	M	2D MLG	1302242	Y-Hypertention/PRK (Cleared)	PASSED	PASSED	PASSED (AirCrew Qual)	PASSED
6	HM3	M	DIV	1322213	N	PASSED	PASSED	PASSED (AirCrew Qual)	PASSED
7	HM3	M	2D MLG	1322245	Y- PRK (Cleared)	PASSED	PASSED	PASSED (AirCrew Qual)	PASSED
8	HM2	M	MAG-14	1322271	Y- PRK (Cleared)	PASSED	PASSED	PASSED (NONAC)	PASSED
9	HM3	M	DIV	1322713	N	PASSED	PASSED	PASSED (NONAC)	PASSED
10	HM3	M	DIV	1322215	N	PASSED	PASSED	PASSED (NONAC)	NO GAS CHAMBER
11	HM3	M	2D MED	1322112	N	PASSED	NO RANGE	PASSED (NONAC)	NO GAS CHAMBER
12	HM2	M	2D MLG	1322150	N	PASSED	PASSED	FAILED 75 YD SWIM	PASSED
13	HM3	M	2D MLG	1322300	N	PASSED	FAILED- ND	FAILED 75 YD SWIM	PASSED
14	HM3	F	2D MLG	1322241	N	PASSED	FAILED-DOR	DOR	N/A
15	HM3	M	MAG-14	779694	N	DROPPED-CARDIO	N/A	N/A	N/A

- **60 to make 12 (5:1 Ratio)**
  - **(~) 60 Corpsman screened**
  - **12 Corpsman selected**
  - **3 Dropped**

- **Army Flight Medic Course**
- **Blood Management Intro**
- **NATOPS requirements**
- **Navy Trauma Training Center**
- **Theater PTP**

CLASS VIII

- **U.S. Army RFF Specified (MES AIR AMB EQUIP SET)**

BACKPACK MEDICAL TACTICAL FIELD CARE .....
BAG TC3 COMBAT CASUALTY CARE V2.....
BLOOD-FLUID WARMER SYSTEM PORTABLE .....
DEFIBRILLATOR MONITOR RECORDER SYSTEM .....
LARYNGOSCOPE SET .....
LITTER TAGLINE MMS KIT .....
OXIMETER PULSE PORTABLE FINGERTIP .....
PANEL MODULAR MEDICAL TRAUMA .....
PUMP INTRAVENOUS INFUSION .....
RESCUE AND TRANSPORT SYSTEM .....
RESUSCITATION KIT MOUTH TO MASK PEDS .....
SPLINT TRACTION - EXTRICATION ADULT .....
SUCTION APPARATUS SURGICAL PROGRAMMABLE .....
THERMOMETER KIT CLINICAL .....
VENTILATOR VOLUME PORTABLE .....

- **USMC AMAL'S (ERCS 647)/ (CASEVAC 648)**

BAG CORPSMAN ASSAULT PACK (CAP)
CAP
BLOOD-FLUID WARMER RUGGEDIZED
DEFIBRILLATOR/MONITOR-RECORDER SYSTEM
LARYNGOSCOPE SET W/SZ 3 BLADES
N/A
OXIMETER PULSE HAND-HELD BATTERY POWERED
BAG ROLLPACK MEDICAL SM W/PLASTIC COMPART
INTRAOSSEOUS INFUSION SYSTEM F/TREATING CRITICAL CARE PLATFORM SYS F/LITTERS
RESUSCITATOR HAND-POWERED ADULT AND CHILD
SPLINT TRACTION-EXTRICATION ADULT
SUCTION APPARATUS SURG PROGRAMMABLE ATTERY
THERMOMETER KIT CLINICAL HUMAN (CAP)
VENTILATOR VOLUME PTBL 8.870X11.5IN
MONITOR PATIENT VITAL SIGNS

OXYGEN

WARNING
DO NOT POSITION FEET
OR STOW EQUIPMENT
UNDER SEAT
DO NOT STOW
EQUIPMENT UNDER
SEAT

FUEL VENT
CAP STOWAGE
FUEL VENT
MATS
EMER
EXIT
CARGO ZONE C
8050 LBS
NONSHAT

ECASEVAC Medical Capabilities

- 12 Corpsman
  - 3 man teams
  - 12hr shifts
  - 9/12 FMF Qualified
- Training
  - 8wks Basic
  - 14wks Corpsman Training
  - 9wks Field Med (8404)
  - 5wks Flight Medic (Ft. Rucker, USA)
  - 2wks Naval Trauma Training Center (NTTC)
  - >200hrs In-Theater Training
    - LCDR Brooks (Anesthesiology)
    - LT Huff (Flt Surgeon)
    - MERT
    - DUSTOFF
    - Spec Ops Surgical Team (Air Force)

- Qualifications (Minimum)
  - Advanced Life Support (ACLS)
  - Basic Life Support (BLS)
  - International Trauma Life Support (ITLS)
  - Pediatric Emergency Prehospital Provider (PEPP)
  - Tactical Combat Casualty Care (TCCC)

- Capabilities
  - 2 Aircraft, fully staffed and equipped
  - 2 Cat A
  - 1A +1B
  - 3B +(2C for each B not filled)
  - 6C
  - No Pediatrics
  - Blood Transfusion Capability
  - Rapid Sequence Intubation

Recruitment of Staff

- MAG Surgeon billets coded for PREV MED AERO/FLIGHT SGN
- RAM community undermanned
- Scope of responsibility and level of authority warrants residency trained experienced FS
  - Principal Staff officer MCMH/SMO/DH/Director
- Position description and advertising

Staff Promotion

- Senior Operational Medicine vs. Executive Medicine false dichotomy!
  - Privileging Authority
  - ECOMS/Quality
    - 1MEF PSR
  - Healthcare business
  - Practice management
  - Strategic& contingency planning
  - Policy development
- Principal Staff(board member)

Staff Retention & Promotion

- I MEF HS leadership White paper to SG
- Mentorship key
- Fitness Reports
  - Competitive ranking among peers
- Expeditionary Medicine AQD 67B
- Training
  - AMDOC
  - Tricare Financial Management Executive Program(TFMEP)
  - MedXellence
  - JSMLC(JTF/COCOM Surgeon course)
- *JPME/Naval War College
- *CPE/ACHE - Executive Medicine certification

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Questions?